perfluoromethylcyclohexane, perfluorodimethylcyclopentane, perfluorotrimethylcyclobutane, perfluorotriethylamine and combinations thereof.

~~41~~ ~~109~~. (Twice Amended) A microbubble preparation comprising **[a]** an aqueous medium having dispersed therein a plurality of osmotically stabilized microbubbles, said microbubbles comprising:

a generally spherical microbubble membrane containing at least one modifier gas **[at least one gas osmotic agent]** and **[at least one modifier gas]** at least one gas osmotic agent, wherein **[said gas osmotic agent and]** said modifier gas and said gas osmotic agent are present in a **[fixed]** molar ratio from about 1:100 to about 1,000:1, wherein said ratio is effective to stabilize said microbubble preparation, with the proviso that said modifier gas is not water vapor, and wherein said gas osmotic agent comprises the vapor of a compound which is a liquid at 37°C and 760 Torr.

~~55~~ ~~123~~. (Thrice amended) A microbubble preparation comprising **[a]** an aqueous medium having dispersed therein a plurality of osmotically stabilized microbubbles, said microbubbles comprising:

a generally spherical microbubble membrane comprising proteinaceous material containing **[at least one gas osmotic agent having from about three to about eight carbon atoms and]** at least one nonfluorocarbon modifier gas and at least one gas osmotic agent having from about three to about eight carbon atoms, wherein **[said gas osmotic agent and]** said modifier gas and said gas osmotic agent are present in a **[fixed]** molar ratio from about 1:100 to about 1,000:1, wherein said ratio is effective to stabilize said microbubble preparation, with the proviso that said modifier gas is not water vapor.

Please add the following claims:

~~84~~ ~~155~~. The microbubble preparation of claim ~~62~~, wherein the molar ratio of said modifier gas and said gas osmotic agent is between about 1:10 and 1:1.

~~85~~ ~~156~~. The microbubble preparation of claim ~~62~~, wherein the molar ratio of said modifier gas and said gas osmotic agent is between about 1:10 and 1:1.

~~86~~ ~~157~~. The microbubble of claim ~~62~~, in which the molar ratio of said modifier gas and said gas osmotic agent is greater than 1:1.

~~87~~ ~~158~~. The microbubble of claim ~~157~~, wherein the modifier gas is a non-fluorocarbon and the gas osmotic agent is a fluorocarbon.

88/159. The microbubble preparation of claim 62, wherein said plurality of osmotically stabilized microbubbles have a diameter from about 1 to 10 μm.

89/160. The microbubble preparation of claim 159, wherein the diameter of said plurality of osmotically stabilized microbubbles is about 6 μm.

90/161. The microbubble preparation of claim 109, wherein the molar ratio of said modifier gas and said gas osmotic agent is between about 1:100 and 1:1.

91/162. The microbubble preparation of claim 109, wherein the molar ratio of said modifier gas and said gas osmotic agent is between about 1:10 and 1:1.

92/163. The microbubble preparation of claim 109, in which the molar ratio of said modifier gas and said gas osmotic agent is greater than 1:1.

93/164. The microbubble preparation of claim 163, wherein the modifier gas is a non-fluorocarbon and the gas osmotic agent is a fluorocarbon.

94/165. The microbubble preparation of claim 109, wherein said plurality of osmotically stabilized microbubbles have a diameter from about 1 to 10 μm.

95/166. The microbubble preparation of claim 165, wherein the diameter of said plurality of osmotically stabilized microbubbles is about 6 μm.

96/167. The microbubble preparation of claim 123, wherein the molar ratio of said modifier gas and said gas osmotic agent is between about 1:10 and 1:1.

97/168. The microbubble preparation of claim 123, wherein the molar ratio of said modifier gas and said gas osmotic agent is between about 1:10 and 1:1.

98/169. The microbubble preparation of claim 123, in which the molar ratio of said modifier gas and said gas osmotic agent is greater than 1:1.

99/170. The microbubble preparation of claim 169, wherein the modifier gas is a non-fluorocarbon and the gas osmotic agent is a fluorocarbon.

100/171. The microbubble preparation of claim 123, wherein said plurality of osmotically stabilized microbubbles have a diameter from about 1 to 10 μm.

101/172. The microbubble preparation of claim 171, wherein the diameter of said plurality of osmotically stabilized microbubbles is about 6 μm.